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THE RANGE AND LIMITS OF THE SCIENTIFIC METHOD[1]

THE method used by the scientist in constructing his theories has led to many spectacular successes and, allegedly, to many equally spectacular failures, when applied to momentous problems confronting man at present. A determination of what science can possibly do and of what it is incapable of doing is therefore of particular interest at this juncture. What are the theoretical and practical problems which the scientific method can solve? To what problems is it inapplicable?

Let us start with a tentative answer. There are, of course, several *accidental restrictions* on the range of theoretical and practical problems solvable by the scientific method, due to fortuitous historical, social, and psychological circumstances under which the method happens to be applied. But are there limits to the applicability of the scientific method *inherent* in its nature? I think that no such limits exist. If a theoretical or practical problem is solvable at all, then its solution can be obtained in principle by applying the scientific method. Problems unsolvable by this method are either meaningless and spurious, or, if meaningful, they are unsolvable by any method, because they have no solution. This oversimplified statement of the inherently universal range of the scientific method requires several qualifications which I shall try to indicate. But basically, such a range of the scientific method seems to be suggested by the few remarks I am going to make.

Some of the *accidental* shortcomings of the scientific method are of particular importance at present. Thus, there is little doubt that, in contradistinction to the relatively mature state of physics, chemistry, and astronomy and the rapid advance of biology, the scientific method has yielded so far comparatively poor results in the social sciences and the humanities. The lag in the sciences of man is apparent from the largely controversial state of expert opinion in respect to the bulk of the relevant problems and also from the disappointingly small predictive and controlling power

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of the available theories. However, the point is that the present relative backwardness of the sciences of man is due to an accidental, not an inherent limitation of the scientific method. This follows from the very fact that this method has by no means been entirely unsuccessful in the sciences of man. An impressive amount of relevant facts has been mustered by carefully planned and controlled observation, e.g., in sociology. In quite a few cases, especially in psychology, general laws adequately supported by observational evidence and providing for fairly accurate prediction of future phenomena have been established. Practical successes in applying theories even to complicated cases are also undeniable: e.g., subtle concepts of the Keynesian theory have been successfully applied in societies with formidable economic structures. These achievements, even if by no means comparable to those of the natural sciences, show nevertheless that the scientific method is not intrinsically inapplicable to social and humanistic problems and that the relative backwardness of the sciences of man is due to an accidental failure of the scientific method to yield so far results as satisfactory as those obtained in other fields.

I do not say, of course, that the present state of any field of human knowledge is *historically* accidental, nor that the backwardness of the social sciences could not be accounted for in historical terms. It is *logically* accidental, since the extant achievements of the scientific method show that there is nothing in its nature which makes it inapplicable to man.

There is another accidental limitation of the scientific method, of particular interest at present and related to the *social function of science*. This function of science consists in supplying society with reliable and relevant information. Science is, in other words, a news-agency comparable in principle to other news-agencies. Of course, there are several distinctive features of the scientific news-agency. Its information is reliable to an exceptionally high degree, due to elaborate techniques of verification, and is also of lasting interest, capable of surviving for centuries and millennia, in contradistinction to the ephemeral nature of the news supplied by other agencies. The role of the fact-finding reporter, called observer in science, is by far more important than in other agencies; he is also permitted and even encouraged to interfere with the events he covers and is then promoted to the coveted rank of experimenter. Nevertheless, the commentator, called theoretician in science, is more highly thought of, although he is often compelled to doctor and cook slightly the facts he receives from the observer, in order to fit them smoothly into general statements of editorial

policy, called scientific laws and theories. However, the liberties taken by the commentator with the news supplied by the observer are circumscribed by precise rules and by no means prejudicial to the conspicuously high standards of professional ethics prevailing in the scientific news-agency; for example, news and comments proved unreliable by accumulating evidence are always withdrawn from scientific circulation, a practice not too common in other agencies. Such differences between science and other news-agencies are undeniable. Still, the basic function of science is not affected thereby. Science *is* a news-agency, as far as its social function is concerned, and this determines to a high degree the conditions under which the scientific method can be effectively used. This method is the method of advancing science, of running the scientific news-agency, and its successful application is therefore subject to limitations proper to any institution of this kind. No news-agency can really thrive and discharge satisfactorily its duty of providing society with dependable, unbiased, genuinely informative news, unless it works in an atmosphere of freedom, toleration, emotional stability, and maturity. If news available to the agency is withheld or distorted because it may displease the sponsor, clash with a long established editorial policy, hurt the habits of thought of a public submitted to a prolonged powerful indoctrination, stir up a panic in an emotionally unstable public, then the news-agency can hardly do a good job. Accordingly, the scientific method cannot be successfully applied in an adverse social setting; science, too, needs an atmosphere of freedom, toleration, emotional maturity, where conspiracy is banned, but heresy permitted, to use a phrase of Sidney Hook. Thus, socially speaking, the range of science is not unlimited. But this limitation is accidental, once more. It refers to extraneous circumstances under which the method comes to be applied, not to its intrinsic nature. It is as compatible with the intrinsic applicability of the method to any and every meaningful problem, as the relatively unsatisfactory results achieved so far by applying the scientific method to man are compatible with its inherent universality.

Let us, however, qualify this universal claim of the scientific method in one respect. The scientist aims both at discovering information and at establishing its dependability: there are scientific procedures of discovery and other scientific procedures of verification and proof. Now, the claim of universal applicability concerns at most the methods of verification and proof, not those of discovery. The history of science shows abundantly that, in spite of all the advances of scientific technique, there never has

been a systematic method of discovery, that trial and error remain, after all, the basic procedure used by all investigators. Is this shortcoming accidental or inherent? Well, it has been shown by mathematical logicians in the last two decades (Church, Turing, Tarski) that no infallible method of discovery could ever be found, because such a method does not exist. It has been demonstrably established, e.g., that apart from the most elementary mathematical theories, and even within elementary arithmetic, there could not possibly exist a method whose correct application to any meaningful problem would lead infallibly, in a finite number of steps, to its correct solution. Cases where such a method does exist are exceptional and, in a sense, trivial. This inherent shortcoming in methods of discovery within science has of course to be granted. However, the point is that a lack of systematic methods of discovery does not carry with it any limitation upon methods of verification and proof. There is no doubt, either, that the latter form the gist of the scientific procedure. Regardless of how an individual investigator did discover a solution to a scientific problem, his solution will not become part and parcel of science unless and until its correctness has been verified by other competent investigators and can be rechecked by any competent investigator. The basic law of hydrostatics and the law of gravitation may have occurred to their respective inventors while one was taking a bath and the other was watching a falling apple; the laws themselves became integrated into science only because they were found to be adequately supported by the observational evidence and because their conformity with the observational evidence can be verified by every investigator.

The gist of the scientific method is therefore verification and proof, not discovery. This method consists essentially of a set of procedures enabling one to ascertain, by appropriately combining observation and logical processing, whether some particular solution to some particular problem is correct, regardless of the way the proponent of the solution got hold of it. This fact shows also why there could not possibly exist limits inherent in the range of science and explains why any problem which is solvable at all, must be solvable in principle by the method of science. In order to realize this, let us consider first the *theoretical* problems and postpone for a moment *practical* ones.

Applying the scientific method to such a problem consists in finding out, by logical inference, what bearing the accumulated observational evidence has on the correctness of some particular solution to this problem. Hence, a theoretical problem would be

intrinsically inaccessible to a scientific approach only if no conceivable amount of observational evidence and logical processing could have any bearing whatsoever upon the correctness of any of its solutions. There are many problems of this kind. A trivial example is afforded by the question as to whether every material object doubles its size every second. It goes without saying that no answer to this question could ever be justified by valid inference from observational data, because the universal swelling would affect the yardsticks along with any other object and therefore remain undetectable. There are other problems, by no means trivial, and yet intrinsically inaccessible to a scientific approach because the correctness of their solutions is not affected by any conceivable observational data subjected to any conceivable logical processing. The realization that some particular problem—e.g., that of absolute simultaneity between distant events—falls under this heading has often marked a decisive advance in science, e.g., in Relativity and Quantum Theory. Such problems have therefore attracted the attention of investigators into the foundations of science and led to a convergent result in the main trends of contemporary philosophy of science, regardless of whether they go by the name of operationalism or neopositivism, pragmatism or instrumentalism, conventionalism or empiricism: theoretical problems on whose solution no conceivable amount of observational data processed by any conceivable logical procedures has any bearing whatsoever, are cognitively meaningless. No answer to such a problem is either true or false, either correct or incorrect, either valid or invalid.

In other words, problems intrinsically inaccessible to scientific methods are cognitively meaningless problems. Propositions answering such problems are cognitively meaningless propositions. That is why no inherent limits could be set to the theoretical range of science. The reason for this scientific monopoly is not the potential omniscience of the scientist, but rather the unintelligibility of the questions to which his method is inherently inapplicable.

Still, quite a few facts about the method of science, some of them relatively recent and very impressive, have often been construed as implying intrinsic limitations of the scientific method. Thus, within the field of pure mathematics and logic, it has been shown demonstratively that, except in trivial cases, no theory can be proved to be consistent, without its consistency proof presupposing the theory itself. In other words, any consistency proof for the basic theories of science, e.g., for elementary arithmetic,

would involve a vicious circle. We have just to take for granted that these theories are consistent, with no hope of ever proving them to be so. This result is well established and it may seem to imply an intrinsic limitation of the scientific method, since it is bound to disregard legitimate and important problems, e.g., those concerning the consistency of basic theories.

Similar negative results have been found to apply to many other aspects of deductive procedures. To quote one more example, it has been shown that whenever a theory applies to some fragment of reality it will also apply to any other fragment of reality isomorphic with the former. Hence, no theory is specific enough to apply to a single fragment of reality and to no other.

These negative results, pointing somehow to intrinsic limitations of deductive procedures, have their counterparts in the empirical field. For instance, there are at present no established laws of nature which would provide for an exact prediction of the individual behavior of a system of material particles, depending upon their initial and boundary conditions. Only statistical predictions concerning the average behavior of large assemblies of such systems are available. And the point is that the failure of science to provide for exact predictions of individual behavior is not accidental, not simply due to the circumstance that, so far, laws required to make such predictions have not been found. Von Neumann has shown, on very reasonable assumptions, that such laws will never be found, because they do not exist. And, of course, everybody is familiar with similar intrinsic limitations of empirical science. Thus, no solution is available or could possibly be found to the question as to how to observe a physical entity without disturbing it appreciably, as to how to increase the accuracy of measurements beyond certain limits, as to how to make out whether some particular physical entity, say light, consists of particles or of waves, etc. There is no point in questioning the inability of science to solve all such meaningful and important problems, nor even in doubting that a solution of these problems, if available, would bring us closer to a satisfactory and comprehensive world-picture. Our question, however, is whether the impossibility of solving such problems is an inherent limitation of the method of science. Granted that this impossibility is not accidental, the point is that it is inherent in the nature of the *problem,* not of the *method.* These problems are unsolvable by the method of science, because they have no solution. It is not a shortcoming of the scientific method when it fails to find something which simply does not exist. The same problems would be un-

solvable by any other, non-scientific method. The impossibility of squaring the circle was not a failure of geometrical methods. The same holds true of all these newly discovered meaningful and unsolvable problems.

I now come to the crucial issue at the present juncture, namely, to the alleged *practical limitations* of the scientific method, to its alleged inherent inability to solve problems concerning human values and human policies. Poincaré maintained that the language of science uses the indicative, not the imperative mood, that science tells us what is and does not recommend what we ought to do about it. This is sometimes unjustifiedly construed as meaning that problems of policy and value are intrinsically incapable of scientific solutions. It seems to me, nevertheless, that the same considerations which apply to the universal applicability of science to theoretical problems, preclude also intrinsic limits to its practical range. Let us, however, first consider two simple examples of this alleged inapplicability of the scientific method to problems of value, before we take up the general question.

A mathematician may prove that a theorem is correct, but he could not possibly prove that the theorem is important or interesting. Importance and interest are value-predicates, beyond the scope of mathematics, even when applied to mathematical propositions. This is certainly correct. The importance of a mathematical proposition is not a suitable topic for a new mathematical proposition and hence beyond mathematics. But this is a limitation of mathematics, not of science as a whole. Another scientific theory may well prove to be competent to deal with this question, just as the history of mathematics deals with mathematics, without being a part thereof. Actually, when one claims that a mathematical proposition is important or interesting—one who is not the author of the proposition—he simply tries to convey that it contains a solution to a problem which bothered competent mathematicians and that they too were prepared to make efforts in order to reach such a solution. Thus the question, although referring to a mathematical proposition, is actually concerned with the *attitude* of mathematicians, and I do not see any reason why mathematical atitudes should prove intrinsically inaccessible to a scientific investigation.

I do not claim, of course, that such an investigation would necessarily pay off by making the nature of mathematical evaluation better understandable, nor, least of all, that it would modify and rationalize the mathematician's scale of values. The scientific method is but a refinement of common-sense procedures and there

is no point in resorting to it when the mathematician's common sense is perfectly sufficient to determine his evaluation of mathematical results. Granted that, in such cases, he has to exercise his "esprit de finesse" rather than his "esprit géométrique," these two factors, correctly distinguished by Pascal, go very well together.

Let us consider another example of a value-statement, say the ethical truth that suffering must not be inflicted unnecessarily. This condemnation of cruelty is certainly valid. Yet, one may point out that sciences officially dealing with suffering, say physiology and psychology, could not possibly produce any evidence concerning the ethical value of cruelty. Physiology and psychology may teach us how suffering can be inflicted, how it can be increased or decreased under suitable organismic and environmental conditions, but they could not possibly infer from their numerous findings concerning suffering that it ought not to be inflicted unnecessarily. This is still correct and shows once more that physiology and psychology of pain and suffering are not competent to solve all the problems concerning these phenomena, e.g., problems concerning ethical aspects of suffering. However, our question is just as to whether such ethical value-statements concerning suffering, though transcending physiology and psychology, transcend necessarily the scientific method itself. The answer depends of course upon an exact logical analysis of the concept of value, and in spite of recent numerous and promising efforts in this direction such an analysis still raises considerable difficulties.

However, in this context and in order to show that a scientific approach is by no means hopeless, it may suffice to assume tentatively that when one proclaims that suffering must not be inflicted unnecessarily, he actually tries to convey that inflicting suffering unnecessarily would be in all probability disapproved by any unbiased and informed arbitrator. The actual meaning of the statement would thus relate to human approval, and I do not see any reason why the nature of approbatory phenomena, though hardly tackled so far by scientific procedures, should be intrinsically beyond their scope.

What about the alleged inapplicability of the scientific method to problems of policy and action, e.g., to the question as to what could be done in order to reconcile individual freedom with the requirements of an efficient assembly-line economy, or as to how the social cohesion of large human groups could be promoted by supplying them with scientifically justifiable information, without

resorting to authoritarian mass-indoctrination? Since we granted that verification, not discovery, is the gist of the scientific method, we must also grant that a scientific approach to a practical problem consists neither in finding out what should be our objectives nor in discovering what course of action should be taken in order to bring about some specific objective, but rather in determining whether a particular course of action envisaged by a human individual or group will bring about the particular objective they pursue. Let us therefore assume that every practical problem can be formulated in this way: Will a specified action taken by a human individual or group, bring about the objective they pursue? A practical problem may be said to be *meaningful* if both the action envisaged and the objective pursued are describable by meaningful propositions. E.g., the practical question as to whether inflation, in a given country, can be checked by appropriating a definite fraction of the national income to public work, is a meaningful one, since both objective and course of action are describable by meaningful propositions. The practical question whether absolute social justice can be obtained by the perfect equality of all the members of the community, is not a meaningful one, because neither absolute justice nor perfect equality is describable by meaningful propositions.

What I am driving at is this: there are no meaningful *practical* problems intrinsically inaccessible to the scientific method, because there are no meaningful *theoretical* problems so inaccessible. A practical meaningful problem about the appropriateness of a course of action in view of a particular objective is equivalent to the theoretical question whether the meaningful proposition describing the course of action envisaged does imply another meaningful proposition describing the objective pursued. The implication of a meaningful proposition by another meaningful proposition is a meaningful theoretical problem, equivalent to the practical problem under consideration, and both are therefore within the inherent range of the scientific method.

To sum up: While suggesting the universal range of the method of science, its ability to cope, in principle, with every meaningful theoretical and practical problem, I do not deny the accidental limitations of the method, severe and even crippling at present. I do not claim that this method should be resorted to whenever possible; the scientific sledgehammer need not be used to crush a difficulty if plain common sense can take care of it. I do not say that a solution could always be found by applying the scientific method, because there may be no solution to the problem and the

method will then consist in showing the non-existence of the solution, not in conjuring it up. Nor do I deny that the scientific information required in order to approach our present major practical problems may be not yet available or in sight, so that it may be sensible to postpone the solution until the scientific information becomes available; all such questions have to be dealt with individually, on their respective merits. What I do suggest is that there is nothing in the nature of these problems or of the scientific method which would make the latter intrinsically inapplicable to them. If meaningful and solvable at all, they can be solved in principle by the method of science.

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THE NATURE OF PHILOSOPHICAL CONTROVERSY[1]

THAT philosophers argue needs no proof. And argumentation is quite probably the only common denominator of the philosophical enterprise in all the forms in which it has appeared. Indeed the very improbability that there is any other common denominator is implied by the fact that every claim to have identified such a denominator can be attacked by cogent argumentation.

Philosophers have not, however, generally taken official cognizance of their own argumentation. Philosophical views as to the nature and function of philosophical controversy have occurred only sporadically. And almost every such view has inadvertently vitiated the very arguments used to support it.

To be convinced on this point, one need only reflect that theories of philosophical controversy generally tend either to doubt that argumentation results in a net gain in insight or to hope that it may. The doubtful theories are exemplified by Hume, Kant, and Logical Positivism. Such positions are characterized by a polemical zeal that is incomprehensible and morally impossible unless it is genuinely motivated by the desire to promote new insights. The philosophical argument to the effect that philosophical arguments make no contribution is surely itself intended as a contribution, and so undercuts itself.

The hopeful theories of philosophical controversy would be represented by traditional views of dialectic prior to Kant. The common theme here appears to be the assumption that philosophical arguments can be resolved within a universe of discourse that includes each of the opposing philosophies, and whose discovery

[1] Adapted from a paper read to the Philosophy Colloquium, The Pennsylvania State University, March 3, 1953.

enlarges human insight.[2] What such theories overlook is that philosophical antagonism may be so radical as to preclude any but the most trivial reconciliation of this kind. To what fruitful universe of discourse, for example, can the conflicting assertions of the theist and the atheist be referred? The real rub, of course, is that the hopeful theories are themselves irrevocably opposed by the doubtful ones. Resolution of this issue would result in the repudiation of the very motive for seeking it, because it would require endorsement of a universe of discourse in which doubt is somehow included along with hope.

Views of both types base their assessment of philosophical controversy on cognitive grounds, in the sense that they are both fundamentally concerned with the question of promoting insights. To avoid the deadlock between them, then, it is reasonable to search for a non-cognitive basis of assessment. A possible outcome of this search is indicated in the material that follows. But it is important to note that the assumption that philosophical controversy must be evaluated on non-cognitive grounds does not necessarily commit one to the view that there is no connection at all between the arguments of philosophers and the enhancement of insights. Such enhancement might well be the *result* of controversy even if not the *purpose* of it.

The doctrine I wish to elaborate is that controversy is one of the channels through which a person may seek power. And one important feature of the kind of power that philosophical argumentation attempts to secure is that it is bilateral. It is power that one can possess only by granting it to others. For there is no dispute at all unless each party to it is willing to be corrected by precisely the same principles he uses to correct the others. If *I* condemn *your* philosophy for violating the Law of Contradiction, or the Principle of Parsimony, I must be prepared to meet *your* charge that *my* view itself fails to satisfy these standards.

This requirement of reciprocity is based partly upon the thought that criticism which applied in one direction only would be a mark of insincerity. More significantly, however, such unilateral criticism would betray its own impotence. For if the critic himself is immune to it, then clearly it cannot have that general effectiveness which any critical principle, to be valid, must have.

Bilateral power contrasts with most of the usual kinds of power, such as physical force, control through reward and punishment, and persuasion through propaganda. These are essentially unilateral in that exercise of power in these senses would be impaired

[2] This assumption is vigorously expressed by Mortimer Adler in his early book *Dialectic* (New York, Harcourt Brace & Co., 1927).

were the exerciser himself subjected to it. In philosophical controversy, on the other hand, the power of a given disputant is enhanced by his subjection to it, because that subjection serves to increase the number of critical principles available for his own use.

I do not mean to suggest, however, that philosophy is the only area in which bilateral power would occur. In point of fact, there are several others, and the problem now is to distinguish the conflicts arising in these areas from those in which philosophers are involved. The first of the areas I have in mind is Empirical Knowledge. Power here is bilateral in the sense that whoever undertakes to correct or supplement the knowledge of another must be willing to be instructed by that other person. This is a part of the meaning of the statement that scientists are impartial. Nor is impartiality in this sense merely an external accoutrement like a laboratory apron; it is an essential ingredient of the scientific outlook. If pride, or some more deep-lying source of partiality, prevents me from accepting the facts you convey to me, you will be properly suspicious that the "facts" with which I am trying to supply you are colored by that same partiality. And I cannot expect you to take seriously my measurement of a certain object unless I am willing to take yours seriously, or to explain clearly wherein I believe it to be discredited. Science is distinguished from superstition as much by its endorsement of this code for the conduct of the understanding as it is by the truth of the statements it makes.

These remarks about bilateral power in Empirical Knowledge should, however, suggest a difference between this and the power sought in philosophical controversy. For no genuinely philosophical argument would depend upon facts. If a fact is the meaning of a true empirical statement—that is, a proposition not strictly implied by previous knowledge—then no fact has ever overturned a philosophical point of view. In the course of an argument, the scientist might well learn something that surprised him. But nothing surprises the philosopher in this way. For his very point of view is a definition of factuality; and whatever fell external to that would not be a fact at all. A philosophy is a systematic point of view; it is a theory embracing a totality in which there are no surprises. For example, no atheist is moved by the announcement that there is design in nature; for such design is not even an intelligible idea on his outlook. Thus it does not fall within the range of possible facts.

Philosophical controversy, then, has to do with systematic order. But this does not serve to distinguish the philosophical from the purely logical criticism of the statements occurring in a dispute.

Logic is a systematic order. And it is an order which no fact could take by surprise; for any putative fact represented as alien to it would be discarded as inconsistent. The distinction I wish to make, however, is fairly obvious. Philosophical polemic attempts to refute not only the arguments for positions, but also the positions themselves. In attacking the belief in innate ideas, Locke attempted to show not only that "If Reason discovered them, that would not prove them innate," but also "It is false that Reason discovers them." Logic, however, has never done more than to locate formal faults in arguments, as, for example, in the Neo-realist polemic against Idealism. Theoretically, of course, a point of view might be criticized as logically inconsistent. But it is characteristic of a genuine philosophical outlook to find no difficulty in reformulating itself so as to avoid the inconsistency. The role of logic in the elaboration of a philosophical view is regulative, not constitutive.

We must conclude, I think, that philosophical controversy concerns the content as well as the formal validity of points of view. It is the direct confrontation of two or more minds, each defending a different content, and aspiring to control the others. But even such a confrontation of philosophical minds will not generate controversy unless certain further conditions are met. For there can be no disputation except where each point of view includes less than the totality of possible content.

This point can be put positively by saying that controversy concerns philosophical positions genuinely exclusive of one another. It follows that each party to a dispute must be defending a position limited in temper or scope. The apparent inconsistency of this requirement with my previous stipulation that a philosophy must embrace "a totality in which there are no surprises" is resolved by pointing out that a philosophy is precisely the expression of totality in terms of a limited universe of discourse. Optimism and Pessimism come to mind as examples. Each excludes the other. Yet each incorporates all of the evidence, in the sense that there is none which could take it by surprise. The optimist will see all present evil as eventual good, and the pessimist all gifts of fortune as carrying a concealed price-tag.

Controversy will not arise, however, even when exclusive positions encounter one another, unless the parties involved have some hope of persuading each other. But no such hope is warranted by any type of criticism I have considered so far; in particular, by the types of criticism characteristic of Empirical Knowledge and Logic. As I just tried to suggest in the case of Optimism and Pessimism, no fact adduced in rebuttal of either could possibly be

admitted as evidence by the position so attacked. Nor is it likely that the argument for either view would contain irretrievable fallacies. But any two exclusive philosophies would be related to each other in precisely this way. Thus unless there is some further sort of criticism, over and above the sorts so far considered, philosophical controversy is hopeless and pointless.

What the two present modes of criticism have in common is externality to the point of view attacked. Facts are useful in polemic only when they fall beyond the scope of the hypothesis under examination. And the utility of Logic is limited to testing the formal validity of an argument, wholly apart from its content. Thus only a mode of criticism in some sense *internal* to philosophical positions could hold out hope for persuasiveness in philosophical argumentation.

When external polemic is used to attack a given philosophy, the objective will be to defeat that philosophy through considerations alien to it. Internal polemic, on the other hand, would attempt to show that the philosophy defeats its *own* purpose. Whatever it exposed would of necessity fall within that philosophy itself, and could be construed as a defect only with respect to the motives that had given rise to the outlook in question. A simple example of this is to be found in the position of Hylas at the outset of Berkeley's dialogue. Hylas wishes to avoid scepticism, and so espouses a materialistic point of view. The import of all of Philonous's arguments, however, is to show that scepticism is an unavoidable outcome of materialism. This outcome represents one of at least half a dozen ways in which a philosophy might be impugned as undermining its own motives—ways which I shall not now enumerate, since their distinction forms part of another study.[3] I should argue, however, that all effective philosophical polemic makes use of such methods, and that Berkeley's dialogue is only one of a myriad of possible examples that might be drawn from the critical writings of the great philosophers.

I do not wish, however, to rest my thesis on this or any other example; for an example is, after all, a fact, and to argue on the basis of facts that philosophical arguments are not based on facts would defeat my own purpose. What I take to be conclusive is not any historical controversy. It is rather the obligation which philosophers feel to engage in controversy. This obligation would be senseless if all criticism were external; for, as I think I have shown, such criticism is largely without avail against philosophies.

[3] See my article, "The Principles of Philosophical Polemic," *Methodos*, Vol. V (1953), pp. 131–140.

If there is a genuine obligation to argue, internal criticism must exist.

It is not difficult to establish the reality of such an obligation. A philosopher is basically an individual responsible for his own view. While the beliefs of others may be no more than thoughtless prejudices or the results of social conditioning, the philosopher can justify his beliefs. But to justify a belief is to be capable of arguing in defense of it. It is here that the philosopher unavoidably solicits controversy. Much though he might enjoy it, he is forever barred from sharing with the common man the luxury of an unexamined life. It is a luxury because the examined life is the cross-examined one.

This account of the philosopher's obligation to argue sheds some further light on the nature of internal criticism. What such criticism or polemic appeals to is just the necessity of maintaining a limited point of view. For the endorsement of some one systematic outlook, unambiguously exclusive of others that might be possible, is surely a part of the meaning of being responsible for one's own position. And should the univocality of such an outlook be challenged, through the disclosure of a consequence incoherent with its own principles or motives, the necessity to revise the outlook would be the same as the necessity that had given rise to it in the first place.[4]

Philosophical polemic, however, can make no appeal whatsoever to the relaxed mind. It is not sufficient for the philosopher merely to grant his adversary the critical powers he himself wishes to possess. In addition, that adversary must be self-controlled. For it is only against the tension of that self-control that the leverage of internal criticism can be applied.

In summary, then, philosophical controversy is the quest for a kind of power that must be distinguished on the one hand from the unilateral use of physical, psychological, or economic force, and on the other from the bilateral criticism manifested in Empirical Knowledge and Logic. The arguments of philosophers concern positions which exclude each other but at the same time express totalities. The consistency of these requirements depends upon the possibility of criticism that is internal rather than merely external. And internal criticism is power, because it is "Control over another insofar as he is in control of himself."[5]

What I have attempted to do in this paper is to argue in favor

[4] The point of this paragraph is elaborated in my articles, "Philosophy and *Argumentum ad Hominem*," this JOURNAL, Vol. 49 (1952), pp. 489–498, and "Cause, Implication, and Dialectic," *Philosophy and Phenomenological Research*, Vol. 14 (1954), pp. 400–404.

[5] This is the phrase of Professor J. W. Miller of Williams College.

of argumentation. It is surprising that although all philosophers argue, so few of them will admit that they see any good in it. The good I see in it is put with some force by the Eleatic Stranger in Plato's *Sophist* (230 E): "We must admit that refutation is the greatest and most efficacious of purifications, and he who has not been refuted, though he be the Great King himself, is in an awful state of impurity; he is uninstructed and deformed in those things in which he who would be truly blessed ought to be fairest and purest."

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BOOK REVIEWS

Soviet Legal Philosophy. V. I. LENIN, P. I. STUCHKA, M. A. REISNER, E. B. PASHUKANIS, J. V. STALIN, A. Y. VYSHINSKY, P. YUDIN, S. A. GOLUNSKII, M. S. STROGOVICH, I. P. TRAININ. Translated by Hugh W. Babb, with an Introduction by John N. Hazard. Cambridge, Mass.: Harvard Univ. Press, 1951. xxxvii, 465 p. (20th Century Legal Philosophy Series: Vol. V.) $7.50.

The success of the Russian revolution of 1917 brought with it a host of legal problems, both practical and theoretical. Many of these problems were set because Marxian theory did not anticipate a successful revolution save where the socialization of the economic process had been realized. Many more problems were created by Marxist strategy, which required the scrapping of existent machinery of the state and of law. Independently of the special factors in the Russian situation, however, the problem of an adequate legal theory was almost a complete one.

The canonic Marxist attitude toward law shares much in common with an attitude toward law that has had a long history: law as a pathological phenomenon. Plato's proposal in the *Republic* to eliminate courts and lawyers was, in the light of actual Athenian practices, among his most radical proposals. The intrinsic connection asserted between justice and "property" has been one specification of this attitude throughout western history. In a world of plenty there is no need for formal rules, just as in a world governed by mutual love, law, indeed, withers away. Classic Marxian formulations continue this tradition. After the transition period of socialism, with the arrival of a communist society wherein each contributes according to his ability and receives according to his needs, law and the state will be consigned to the museum of antiquities. For control over men there will be substituted the

administration of things. Law was a by-product of distortions and corruptions of incomplete and inadequate societies, an instrument and a mask for injustice. In an ideal society there would be no need for law—for bailiffs, jails, courts, lawyers, judges, for juridic concepts, rules, doctrines, technical refinements, no need for systematic ideologies such as law.

The need for a systematic treatment of the problems in a general theory of law became quite clear after the revolution. Little had been thought through concerning the precise connections between law, ethics, custom, and the state. The basic relations between law and the state were especially in need of attention. Moreover, except as the theory of law is in some degree separated as a special problem, problems in the domain of the juridical remained confused. While basic legal questions in part parallel those concerning the state, they require, nonetheless, specific and independent elaboration. Was the "withering away" of the law to start at once? What are the consequences of the modifying condition of the fact of socialism in one country? What is to be the character of law during the transition stage of socialism? Is there a socialist law as distinct from continued use of bourgeois forms? How do the historic forms of law relate to economic foundations? In what special ways are economic factors translated into legal concepts? How does law reflect back upon economic factors?

The history of Soviet jurisprudence is the history of the search for answers to these and other questions. The search did not go on independently of the circumstances of the political and economic life of Russia; moreover, it was not all independent of conscious political decisions about law. With respect to the changing circumstances, Soviet jurisprudence showed a not unnatural tendency to universalize the situation of the moment. Since these situations changed rapidly, it made for a frequent reformulation of fundamental doctrine without a cumulative advance in depth. This appears to be especially true for the first fifteen years after the Revolution. The second period, through World War II, illustrates a more consistent emphasis and direction. This has been due, in good part, to tailor-making of doctrine in accordance with political orders. Hence, the machine quality of much of the doctrine, its pedestrian advance, stands in marked contrast to the earlier more imaginative and individualized thought.

The publication of this volume of translations of writings in Soviet jurisprudence offers an excellent opportunity to pass in review some of the major milestones and aspects of this development. The translations consist of a number of essays, speeches, and pronouncements interspersed among substantial selections

from books on the theory of law. In all, the writings of ten individuals are presented, including short, crucial, and not normally available statements by Lenin, Stalin, and Vishinsky. Selections from the works of Stuchka, Reisner, Pashukanis, Yudin, Golunskii and Strogovich, and I. P. Trainin are included, in some cases from works of different periods. Selections are restricted to materials other than the elaboration of detailed concepts within the field of law. From the standpoint of readability the translations are excellent, and the introduction by Professor John Hazard is an example of what an introduction should be.

The first period of Soviet jurisprudence, from the Revolution to 1930, is represented by writings of P. I. Stuchka, one of the first Commissars of Justice, M. A. Reisner, a legal theorist whose influence was strong but short lived, and E. B. Pashukanis, whose role in the development of Soviet legal theory and practice is crucial to the study of Soviet theory. These writings possess a vitality that is natural where the need for theory is practical and the issues of thought are charged with creative consequence. Though they each represent radically different approaches to legal theory, they illustrate in common the extent to which changing conditions precipitated different emphases of theory. Stuchka offers a blunt, hardheaded, force-and-interest theory of law which owes a good deal to Ihering. Reisner, in contrast, seeking to wed Marx and Petrazhitskii, takes the latter's idealistic theory of individual intuitive law (a form of a natural law doctrine) and integrates it with the concept of class consciousness, to give a theory of the development of law as a progressive realization of equality. On this basis he espoused the appeal to the "revolutionary proletarian consciousness" as an adequate basis for law, justice, and decision.

E. B. Pashukanis has long been recognized as the outstanding theorist of law in the history of Soviet jurisprudence. The editors of this volume have translated all of one work, and, in addition, a long monograph, the whole amounting to almost one-half of the contents of the volume. This was an excellent decision, for Pashukanis not only deserves the attention in his own right, but the changes in Soviet jurisprudence that take place in the Thirties are beautifully shown in the contrast between his earlier and later work.

The key notion in Pashukanis' legal theory is the correlation between forms of market exchange or circulation and legal forms. The source of this approach is Marx, as Pashukanis insists in his subsequent retractions. It is ". . . a criticism of the bourgeois commercial essence of all the phases and the manifestations of capitalist civilization. Detestation of this commercial spirit, and

a yearning to unmask it in all its more concealed, subtle, and—as it were—elevated forms, constitute the basic motive running throughout the entire book from beginning to end" (p. 253). The chief of these legal forms were the important abstractions of equality and freedom, and the concept of legal subject, i.e., legal personality as the bearer of rights. Whatever his motive, his study of the nature and forms of law, as incorporated in the *General Theory of Law and Marxism,* is an outstanding achievement. It is subtle, supple, systematic, independent, and fresh. Though it is as one-sided in its emphasis upon the exchange factor in the growth and nature of legal forms as Kelsen's emphasis is upon the normative purity of law, in quality it is comparable to the work of Kelsen.

The analysis of basic legal categories led Pashukanis to two conclusions, both of which were to cause him trouble and both of which have need of serious correction. The first is: "Only bourgeois-capitalist society creates all the conditions essential to the attainment of complete definiteness by the juridic element in social relationships" (p. 110). The second is: "The dying out of the categories . . . of bourgeois law by no means signifies that they are replaced by new categories of proletarian law—precisely as the dying out of the category of value, capital, gain and so forth will not (with the transition to expanded socialism) mean that new proletarian categories of worth, capital rent, and so forth appear. The dying out of the categories of bourgeois law will in these conditions signify the dying out of law in general: that is to say, the gradual disappearance of the juridic element in human relations" (p. 122). Since the bourgeois form of law is taken to be the final and completed form of law, and since any essential juridic element in human relations is denied to proletarian society, the transition period of the dictatorship of the proletariat had to take the form of bourgeois law. It was the task of the transition law to eliminate itself; this meant the rapid movement to policy administration as opposed to civil and criminal law. As head of the Law Institute and as virtual director of legal research and legal education, Pashukanis made significant changes, including the virtual elimination of civil law subjects from the educational curriculum and substituting for these an emphasis upon economics and economic administration.

Political conditions changed too fast and too radically for Pashukanis. He was too deeply enmeshed in one view of law, and despite his efforts to do so, he could not manage a sufficient about-face to keep in line with the more positive attitude toward law

that developed in the Thirties. He not only fell from grace but met his death in 1937.

Two statements of Vishinsky serve to indicate the contrast in the attitude toward law represented by Pashukanis, and in general by most of the theorists in the initial construction stage of Soviet jurisprudence, and the emergent view.

> Only one who is consciously falsifying history and reality can perceive in capitalist society the supreme and culminating point of legal development. In capitalist society, law shares the fate of that society. Capitalism decays and with it the law of capitalist society decays. History shows that, on the contrary, law is elevated under socialism to the highest stage of its development. Only in socialist society does law acquire a firm ground for its development. It is not the epoch of imperialism—it is the epoch of socialism—that is the epoch most favorable for the development—and for the triumph—of law and of legality. [P. 328.]
>
> The tasks confronting us at the present time require work which is directed at making the soviet law and soviet state strong. Consequently as regards the scientific working out of any specific problems, the basic and decisive thought must be the aspiration to guarantee the development and strengthening of soviet law to the maximum degree. [Pp. 331–332.]

Concerning men like Pashukanis, Vishinsky's language is fairly typical:

> This gang of thieves, betrayers, and traitors crept into certain of our institutes and made a mockery of our science. These scoundrels sabotaged in every sort of way and did everything within their power to ruin a cause to which at every step they perfidiously and hypocritically swore devotion. [P. 331.]

The about-face which Soviet jurisprudence made necessitated a good deal of name calling; it involved also some radical shifts in emphasis in the treatment of the canonical texts of Marx and Lenin. On the problem of the law of the transition period, for example, Vishinsky attempts to minimize the importance of the basic texts on which the earlier theorists like Pashukanis rested.

> Marxism Leninism speaks of *traces of bourgeois law* insofar as labor continues here and there to be a gauge of values. Having pointed out the historical points of coincidence between the law of the transition period and bourgeois law, Marx emphasizes that their very principle and practice differ, so that it cannot be said that the law of the transition period is bourgeois *in the direct sense* of the word. *It is clear* [sic] that the term "bouregois" is here used *in a relative sense*. . . . [P. 334. My italics.]

While the withering away of the state and law is never given up by Vishinsky or by the other authors reprinted in this volume, it is made meaningless and stands in actual contradiction to most of the assumptions now operating about the nature and character of law.

Where Stuchka had identified law as a pale reflection of "social

relations" and Pashukanis, following the Marxian analysis of political economy, had identified law carefully and in detail with the economic structure of exchange of labor equivalents and the circulation of goods through "free contract," Vishinsky and Trainin emphasize in contrast the normative, the constraint, and the domination of a particular class as primary defining elements of law.

> Law is the aggregate of the rules of conduct expressing the will of the dominant class and established in legal order, as well as of customs and rules of community life confirmed by state authority, the application whereof is guaranteed by the coercive force of the state to the end of safeguarding, making secure and developing social relationships and arrangements advantageous and agreeable to the dominant class. [P. 336.]

This definition of law was made by the Institute of Law of the Academy of Sciences following propositions to this effect submitted by Vishinsky. Four points are notable about this definition. In the first place, there is an emphasis upon the formal legality of the "rules expressing the will of the dominant class" by virtue of requiring that the will be "established in legal order." It is not entirely clear what this means, but it suggests a trend to that "hated" Rechtstaat concept that in the past had been so mercilessly criticized as bourgeois ideology. Secondly, in placing the state in such a commanding position as source and authority, it pushes into the background the Marxian conception of the economic determinant. In the third place, it emphasizes custom and "rules of community living" as a part of the law. Vishinsky does not discuss this point and the reasons lying behind its explicit inclusion are not clear. It has the effect, however, of extending the meaning and scope of law, and it does so in such a way that it is difficult to see what the withering away of the law could possibly be. In the fourth place, and perhaps most important of all, law is given a creative role in "developing social relationships." Vishinsky, in his comment on this, makes the point explicitly: ". . . the active and creative part it [law] plays in the struggle for the new, socialist order of social relationships" (p. 338). The concept of law as ideological screen and instrument of a class struggle is replaced by the concept of law as a social tool in the building of socialism and the transition to communism. We have here added the third main reason for pushing the withering away of the state into the far-off future. The first reason, control over the defeated bourgeois class within the country, was renounced, in effect, with the declaration that socialism had arrived. For it was substituted the reason of protecting socialism within the country from attacks from without, and especially from spies and traitors. This reason still holds, and will continue to do so, until world communism is achieved, but to it is

added the more important concept of the creative role of the law in problem-solving situations, problems that are not connected in any direct way with the class struggle.

With these new emphases, Soviet legal theory comes back into the orbit of the jurisprudence of European countries. Though it retains a considerable number of problems peculiar to this jurisprudence by virtue of carrying along, even though only formally, the older Marxist formulae, its theoretical problems are, in character, close to those of western jurisprudence. The work of P. I. Trainin illustrates this well. Trainin, who died in 1949 somewhat under an official cloud because of some of his recommendations and actions, was head of the Institute of Law of the Academy of Sciences succeeding Vishinsky. The key concept in his exposition is neither law nor the state, but "policy." Trainin's discussion of the concept refers it back to the Greek concept of "politeia" and in particular to Aristotle's use of the idea of "political science" as the art of the general good. Trainin writes, with apparent approval, "Policy—a doctrine concerning the state which at the same time embraces all sides of social life including ethics, law, economics, pedagogy, and so forth" (p. 441). It is not, however, out of the Greek concept but out of Lenin's various statements on policy that Trainin builds most explicilty. "Policy is participation in the affairs of state: the trend of the state; the definition of the forms, tasks and content of the state's activity" (Lenin's Miscellany 14). The important factor introduced by means of this complex notion is that it points both to limitations and to demands on the state and the law, and makes of "policy" a kind of actual force and determining ideal. It incorporates something of the idea of a "living constitution." Illustrative of its objective force and its operation as a principle of limitation are the following statements:

> Policy is the concentrated expression of economics, responsible for the content and the direction of the state's activity, for the state's action effective upon the inter-class relationships made secure by law, for the state's influence upon the development of forms of consciousness (science, art and so forth), and also for the reverse influence of the entire superstructure upon the economic basis. . . . The policy of the dominant class is given material existence in organized form through the state and the law formulated by the state. . . . Policy has provided the impetus for all the great overturns in the history of mankind and the state. . . . Neither the state nor law either develops or operates in isolation from policy; so it has been throughout the history of state and law, and so it is in the socialist state. . . . Law cannot go beyond the bounds of the policy of a particular stage. . . . What is said here as to the correlationship of policy, state, and law is in contrast to the views of bourgeois political experts who . . . hold forth to the effect that the state can formulate new law at will: that it can dictate law. [Pp. 443–449.]

At the same time, "policy" is the art and science of this complex whole of a developing "social constitution" with its implicit needs and potential goals. The state has the task, through its agents, of formulating policy, leading the way, building and constructing and safeguarding. It is prospective in its orientation: "The policy of the soviet state started from the level of production forces which we must attain according to scientifically verified data on the road to our objective—and not merely from the level of those forces at the given moment" (p. 450). Both law and the state have creative roles to play with the state playing the stronger role; law has more the aspect of safeguarding and making concrete and explicit the norms for the time and place. Both have become essential and enduring instruments in the pursuit of the art and science of living well in a developing society.

In the concluding section of his introduction Mr. Hazard indicates that since 1949 the basic trend in legal theory has been unchanged and that the major efforts of writers have been to develop answers to special problems connected with the definition of juridic concepts as set within the general framework that makes law and the state essential features of a developing society and makes the operations of state and law as wide and as deep as social order and process itself. Whatever may be the eventual fate of this approach to law, it is certainly a dialectical revolution from, and the antithesis of, the critical utopianism of orthodox Marxism.

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Idealistic Thought of India. P. T. RAJU. Cambridge, Mass.: The Harvard University Press, 1953. 454 pp. $6.50.

Philosophical interchange between Eastern and Western thinkers will be furthered by this able work from the pen of the Professor of Philosophy at the University of Rajputana, Jaipur, India. While idealism is not presently to the fore in Western thought its rôle historically has been important and it takes on new interest in the light of Indian reflective experience as our knowledge of this becomes more adequate. Professor Raju is not the first, to be sure, to discuss varieties of Indian idealism. Both S. Radhakrishnan and S. N. Dasgupta have described these in notable historical studies, the latter especially devoting a separate volume to the subject in 1933. Raju's treatment differs, however, in stressing the logical development of the systems and the interrelations of their concepts. He is interested in idealism as a feature in both Indian and Western thought. While he reckons with the varying positions of ancient Vedāntic and Buddhistic thinkers, to whom he devotes the

body of his work, he also offers preliminary general discussion of idealism as theory of reality and of value in the light of findings in well-known Western positions. In addition, he presents two valuable chapters on contemporary idealism in India as reflected in such writers as Gandhi, Aurobindo Ghose, Tagore, Radhakrishnan, Hiralal Haldar, Bhattacharya, and Sir Mohammad Iqbal. The over-all aim is to bring out the full implications of idealistic metaphysics and show how its systems in the West and India are complementary to each other.

Historically, the word idealism has been taken in many senses. The author shows his familiarity with Western definitions as these have emerged in the course of European thought. For himself, however, he chooses to define idealism as "the theory which asserts the reality of the ideal, and explains the world in order to maintain this concept of reality" (p. 69). Such a definition avoids making a hard and fast distinction between idealism and realism and is wider in meaning than the *esse est percipi* principle of mentalism or subjectivism. It is an explanation of the world wherein the ideal is found in the actual without asserting their identity. From the author's standpoint, idealism is thus a philosophy of both reality and value. With so broad a definition he is enabled to cast his net widely in the course of his discussion.

In treating of Vedāntic idealism Raju analyzes the differing reflective superstructures reared upon the vast miscellany of the Upaniṣads. These are found in the thought of Śaṅkara and his followers, of Rāmānuja, Nimbarka, Bhāskara, Śrīkaṇṭha, Śrīpati, Vallabha, Śuka, Caitanya, Vijñānabhikṣu, and Madhva. While respecting these as historically important Raju does not regard them as of equal validity logically. He agrees evidently with Thibaut that Śaṅkara's interpretation accords best with the Upaniṣads taken together, though Rāmānuja's thought is perhaps closer to Bādarāyana's digest of their ideas in the *Brahmasūtras*. The greater adequacy of the systematic form given to the ideas by Śaṅkara springs, Raju thinks, from his doctrine of Māyā. For while Śaṅkara holds with the Upaniṣads that ultimate reality is of the nature of Self-consciousness, he sees the world of phenomena as a superimposition upon it, detected as unreal in a logical sense because of its contradictory variety. The phenomenal world is thus cosmic illusion as being other than the ultimately real (Brahman), yet not an illusion in the order of imagination or hallucination, for it is neither unreal nor non-existent. Māyā, Raju holds, is simply the contradictoriness of the world, pointing beyond itself to the ultimate non-contradictory truth of Brahman whose nature is consciousness.

Other Vedāntic idealisms are also considered. In general these avoid the transcendent monism of Śaṅkara's ultimate Self (Brahman) and also reject his doctrine of Māyā. They present different forms of pluralism or realism, and project identity-difference systems (Bhedābheda) where God, world, and finite selves comprise a whole within which real distinctions exist. Among these Rāmānuja's interpretation is outstanding. Yet although it lies closer to religious and practical interests, Raju finds it less satisfying logically than Śaṅkara's idealistic monism.

Of Buddhistic philosophy in all its schools the author gives a careful account. It is of interest, he thinks, because it shows how a line of thought beginning as a naïve realism unfolds through centuries of continuous self-criticism and reflection into a speculative idealism of the highest type. The story is traced all the way from early teachings in the Theravāda and other Hīnayāna schools, through the Satyasiddhi School of Harivarman (a transitional development), to Mahāyāna systems in the *Prajñāpāramitās*, the Mādhyamika and Vijñānavāda teachings, the *Laṅkāvatāra Sūtra* and the Bhūtatathatā doctrine in the *Awakening of Faith*. Culmination of the development appears on the negative side in the dialectical criticism by Nāgārjuna of all determinations in the categories of relative existence, and on the positive side in the absolute idealism of Asaṅga and Vasubandhu, for whom only consciousness with its ideational transformations exists. Thus the final insight of Buddhistic speculation is that the stuff of the universe is pure consciousness. Vasubandhu especially is at pains to show how the multiple characteristics of things are rooted in that source. All particularities are differentiations and recombinings within consciousness. Here we are presented, Dr. Raju admits, with an idealism that goes beyond any Vedāntic system in identifying final reality and world. The ocean of consciousness is one with its waves, but the latter in endless transformation make up the variety of the world.

As for contemporary Indian idealism, the author's treatment is noteworthy for his interesting synopses of the thought of the writers studied. A common tendency seen in all of them is a change from a negative attitude toward the world to positive affirmation of its values. There is also a tendency, in Aurobindo Ghose and Sir Mohammad Iqbal at least, to stress self-affirmation instead of self-negation. Something like an anti-traditionalist philosophy is developed by Krishnamurti. Traditionalism too has its champions in practice if not in theory, but it is Raju's conviction that traditionalism and anti-traditionalism in their extreme forms are neither desirable nor philosophically justifiable. With

reference to the concept of Māyā, Raju finds that contemporary thinkers like Radhakrishnan, Tagore, and Bhagavan Das are less inclined to understand it negatively as illusion or as neither real nor unreal, than positively as both real and unreal. In other words, Māyā or the world as we know it is a mixture of both reality and unreality, and consequently something to be dealt with positively and creatively. "Nature can be moulded in a way that agrees with the moral ideal" (p. 436).

At the end of his long exposition Professor Raju comes to the conclusion that the final goal of Indian idealism is freedom of spirit. This does not mean aloofness and escape from the world but transformation and assimilation of its substance into spirit. "The material aspect of the world is the arena for action" (p. 431). Western readers will probably question whether the historic documents of Indian idealism can bear the weight of this interpretation in every instance. Utterances of world and life negation are certainly not lacking in Indian philosophic literature. Yet Professor Raju's reading of spiritual tendency in the whole development is itself a contribution in the context of Indian thought. Without rejecting the actual it points to its transmutation through the ideal and the spiritual. It makes room for recognition of modern aspirations after achievement, mastery of matter, and control of world forces, but maintains a valuable corrective in the loftiness of the end assigned. Professor Raju has examined the idealistic thought of India to good purpose.

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NEW BOOKS

BROWN, CLARENCE ARTHUR, ed.: *The Achievement of American Criticism; Representative Selections from Three Hundred Years of American Criticism.* Selected by Clarence Arthur Brown, with a Foreword by Harry Hayden Clark. New York: Ronald Press [1954]. xxii, 724 p. $7.50.

DEWEY, JOHN: *Essays in Experimental Logic.* New York: Dover Publications [1954]. 444 p. Cloth, $3.50; Paper, $1.75.

FESTUGIÈRE, ANDRÉ-JEAN, O.P.: *Personal Religion among the Greeks.* Berkeley & Los Angeles: Univ. of California Press, 1954. viii, 186 p. (Sather Classical Lectures, Vol. 26.) $3.75.

FESTUGIÈRE, ANDRÉ-JEAN, O.P.: *La révélation d'Hermès Trismégiste.* IV. *Le Dieu inconnu et la Gnose.* Paris: Librairie Lecoffre, J. Gabalda, 1954. xi, 315 p. (Études Bibliques.) 2000 fr.

FRIEDBERG, FELIX: *Thoughts about Life.* New York: Philosophical Library [1954]. 40 p. $2.50.

FRIEDRICH, CARL J., and MCCLOSKEY, ROBERT G., eds.: *From the Declaration of Independence to the Constitution; the Roots of American Constitutionalism.* Edited with an Introduction. New York: Liberal Arts Press [1954]. lxviii, 71 p. (The American Heritage Series, No. 6.) Paper, $0.75.

JUNG, C. G.: *The Practice of Psychotherapy; Essays on the Psychology of the Transference and Other Subjects.* Tr. by R. F. C. Hull. 14 Illustrations. [New York:] Pantheon Books [1954]. xi, 377 p. (Bollingen Series XX.) $4.50.

LÖWITH, KARL: *Heidegger, Denker in dürftiger Zeit.* [Frankfurt am Main:] S. Fischer, 1953. 111 p. (Schriftenreihe "Ausblicke.")

MACH, ERNST: *The Principles of Physical Optics; an Historical and Philosophical Treatment.* Tr. by John S. Anderson and A. F. A. Young. With Ten Plates and 280 Diagrams. [New York:] Dover Publications [1954]. x, 324 p. Cloth, $3.50; Paper, $1.75.

MCKEON, RICHARD: *Thought, Action and Passion.* Univ. of Chicago Press [1954]. ix, 305 p. $5.00.

NOTES AND NEWS

The following are among those who have received Guggenheim fellowship awards for 1954:

Dr. Ralph Cohen, Assistant Professor of English, University of California, Los Angeles. "English philosophy and literary theory in the 18th century."

Dr. Elias Denissoff, Professor of Philosophy, University of Notre Dame. "Interrelationships between Eastern and Western thought."

Dr. Sears Reynolds Jayne, Assistant Professor of English, University of California, Berkeley. "Renaissance Platonism and its influence upon English literature."

Dr. Mortimer R. Kadish, Assistant Professor of Philosophy, Western Reserve University. "A philosophical study of science as part of modern cultural experience."

Dr. Juan Roura-Parella, Professor of Romance Languages and Humanities, Wesleyan University. "Philosophy of Wilhelm Dilthey."

Dr. Carl Emil Schorske, Associate Professor of History, Wesleyan University. "The emergence of characteristic 20th century modes of thought in the period 1890–1914."

Rev. Dr. Edward Surtz, S.J., Associate Professor of English, Loyola University, Chicago. "The intellectual milieu of Thomas More's *Utopia.*"

Dr. Reidar Thomte, Professor of Philosophy, Concordia College, Moorhead, Minnesota. "Existential categories in the philosophy of Sören Kierkegaard."

Dr. Peter Robert Viereck, Professor of History, Mount Holyoke College. "Intellectual history of 19th century England."

The third series of the Matchette Foundation Lectures in Philosophy was delivered at Brooklyn College, May 3rd and 4th, 1954, by Lewis Mumford, under the general title: *The Remaking of Modern Man.* The two lectures were separately titled: "The Confinement of Caliban" and "The Redemption of Prospero."

The following officers of the Southern Society for Philosophy and Psychology were elected at the business meeting on April 17, 1954: President, Professor Charles A. Baylis, Duke University; Secretary, Professor Joseph E. Moore, Georgia Institute of Technology; Treasurer, Professor Nicholas Hobbs, George Peabody College; Council Member for Philosophy, Professor Lewis E. Hahn, Washington University; Council Member for Psychology, Professor Edward E. Cureton, University of Tennessee.

The New Mexico Philosophical Society held its sixth annual meeting May 1–2, 1954, at the New Mexico College of Agriculture & Mechanic Arts, State College, New Mexico. The following papers were presented:

"About Science," by Lisle Hosford.

"A Guiding Philosophy for Modern Science," by Ralph W. Dressel.

"Sociology of Knowledge," by Ivan Little.

"Organicism: A New World Hypothesis," by Archie J. Bahm.

"Some Implications of Kant's Philosophy of Time," by Mark Temmer.

The following officers were elected for 1954–55: President, Jaime Vélez, College of St. Joseph; Vice-President, Lisle Hosford, Highlands University; Secretary-Treasurer, Archie J. Bahm, University of New Mexico.

The Society will repeat its tuition scholarship essay contest for New Mexico high school seniors. The essay topic for next year is: "How should ethics be taught in high school?"